

AMENDMENTS TO THE CLAIMS

1. (Withdrawn) DNA encoding at least one luciferase selected from the group consisting of a red-emitting luciferase and a green-emitting luciferase derived from a rail road worm and a green-emitting luciferase and an orange-emitting luciferase derived from *Rhagophthalmus ohba* stably expressed in mammalian cells, characterized in that (1) the DNA has no binding sequence for an additional transcription factor in the mammalian cells and has a codon usage for the mammal.

2. (Withdrawn) The DNA according to claim 1, characterized in that the mammal is human and the DNA has at least one nucleotide sequence selected from the group consisting of SEQ ID NOS: 7, 10, 11 and 16.

3. (Withdrawn) A method for enabling the expression of DNA encoding a luciferase derived from a rail road worm or *Rhagophthalmus ohba* in mammalian cells, characterized by having

- 1) a step of altering a cDNA sequence such that no additional transcription factor is bound;
- 2) a step of changing a codon usage for insects to that for mammals in the cDNA sequence; and optionally
- 3) a step of altering the cDNA sequence with many restriction enzyme sites due to limited application at the use.

4. (Withdrawn) The method according to claim 3, characterized in that an amino acid sequence of the luciferase is not altered.

5. (Withdrawn) A polypeptide which is a luciferase with a maximum luminescence wavelength of 630 nm, represented by:

- (1) a polypeptide having an amino acid sequence of SEQ ID NO:4; or
- (2) a polypeptide having one or more amino acid substitutions, additions or deletions in the sequence of SEQ ID NO:4.

6. (Withdrawn) The polypeptide according to claim 5, expressed in mammalian cells.

7. (Currently Amended) A gene construct comprising ~~one or two or more genes of luciferases which emit light whose wavelength does not substantially depend on a determining condition and maximum luminescence wavelength is 535 to 635 nm, which is stably expressible in mammalian cells~~ at least one luciferase gene selected from the group consisting of SEQ ID NOS: 7, 10 and 11.

8. (Withdrawn - Currently Amended) The gene construct according to claim 7 comprising ~~3 or more~~ three luciferase genes stably expressible in mammalian cells wherein ~~one or two or more genes of luciferases with a maximum luminescence wavelength of 460 to 520 nm together with one or two or more genes of luciferases which emit light whose wavelength does not substantially depend on a determining condition and maximum luminescence wavelength is 535 to 635 nm.~~ said three luciferase genes are represented by SEQ ID NOS: 7, 10 and 11.

9-11. (Cancelled)

12. (Previously Presented) An expression vector containing the gene construct according to claim 7.

13. (Cancelled)

14. (Currently Amended) Mammalian cells comprising two or more stably expressing genes of luciferases wherein said genes are selected from the group consisting of SEQ ID NOS: 7, 10 and 11 ~~which emit mutually distinct light whose luminescence wavelength does not substantially depend on a determining condition under the control of different promoters in the mammalian cells.~~

15-18. (Cancelled)

19. (Withdrawn - Currently Amended) The mammalian cells according to claim 14 comprising three ~~or more~~ luciferase genes under the control of different promoters wherein a first said three luciferase gene is genes are represented by SEQ ID NOS: 7, 10 and 11. ~~under the control of a constantly expressed promoter, a second luciferase gene is under the control of a pseudopromoter, and remaining one or more luciferase genes are under the control of a promoter subjected to assessment.~~

20. (Withdrawn) The mammalian cells according to claim 14 comprising 4 or more luciferase genes under the control of different promoters, wherein a first luciferase gene is under the control of a constantly expressed promoter, a second luciferase gene is under the control of a toxicity assessing promoter, a third luciferase gene is under the control of a promoter of a protein which accepts an external factor, and remaining one or more luciferase genes are under the control of a promoter subjected to assessment.

21. (Withdrawn) The mammalian cells according to claim 14 comprising 4 or more luciferase genes under the control of different promoters, wherein a first luciferase gene is under the control of a constantly expressed promoter, a second luciferase gene is under the control of a pseudopromoter, a third luciferase gene is under the control of a promoter of a protein which accepts an exogenous factor, and remaining one or more luciferase genes are under the control of a promoter subjected to assessment.

22. (Cancelled)

23. (Withdrawn) The mammalian cells according to claim 14 comprising two luciferase genes under the control of different promoters, wherein a first luciferase gene is under the control of a constantly expressed promoter, and a second luciferase gene is under the control of a pseudopromoter.

24. (Withdrawn) A method for screening drugs comprising a step of culturing the mammalian cells according to claim 18 in the presence of a drug candidate compound in a medium of the mammalian cells, a step of quantifying an amount of the above luciferase in the

presence or absence of the candidate compound, and a step of assessing an effect of the candidate compound on a promoter subjected to assessment, which is linked to at least one luciferase.

25. (Withdrawn) A system for multiply determining transcription activity of each promoter linked to each luciferase before and after a change of a culture environment by changing the culture environment of the mammalian cells according to claim 13, and assessing expressed amounts of two or more luciferases which emit mutually distinct light whose luminescence wavelength does not depend on a determining condition.

26. (Withdrawn) The system according to claim 23 capable of simultaneously determining expressed amounts of two or more luciferases.

27. (Withdrawn) The system according to claim 23 capable of determining expressed amounts of three or more luciferases.